

a filter housing formed of a first material;

a replicate property matching material disposed encapsulated within said filter housing; and

a pair of substantially parallel plates disposed encapsulated within said filter housing on opposite sides of said replicate property matching material, said plates being formed of a second material different from said first material, whereby said filter housing, said replicate property matching material and said plates generate an opposite polarization pattern based on a polarization pattern of a to-be-detected entity according to a spatial gradient of the to-be-detected entity local electric field distribution.

Claim 6, line 3, delete "a" and insert --the--.

Claim 9, line 3, delete "a" and insert --the--.

Claim 14, line 3, delete "a" and insert --the--.

Claim 16, line 3, delete "a" and insert --the--.

19. (Amended) A selective polarization matching filter comprising:

a filter housing formed of a replicate dielectric property matching material, said filter housing defining a cavity therein having a pair of exit ports;

a dielectric material disposed in said cavity, said dielectric material being different from said replicate dielectric matching material; and

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a pair of conducting inserts disposed in said exit ports, respectively, said conducting inserts extending to an exterior of said filter housing, whereby said filter housing, said dielectric material and said conducting inserts generate an opposite polarization pattern based on a polarization pattern of a to-be-detected entity according to a spatial gradient of the to-be-detected entity local electric field distribution.

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22. (Amended) A selective polarization matching filter comprising a composition of materials configured to generate an opposite polarization pattern based on a polarization pattern of a to-be-detected entity according to a spatial gradient of the to-be-detected entity local electric field distribution.

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27. (Amended) A method of manufacturing a selective polarization matching filter comprising assembling a composition of materials to generate an opposite polarization pattern based on a polarization pattern of a to-be-detected entity according to a spatial gradient of the to-be-detected entity local electric field distribution.

REMARKS

Claims 1-29 are present in this application. By this Amendment, claims 1, 6, 9, 14, 16, 19, 22 and 27 have been amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.